



# ACE165N750G

## N-Channel Enhancement Mode Power MOSFET

### Description

ACE165N750G series are from the innovated design and silicon process technology to achieve the lowest possible on- resistance and fast switching performance. It provides the designer with an extreme efficient device for use in a wide range of power applications.

The TO-220F package is widely preferred for all commercial-industrial through hole applications. The mold compound provides a high isolation voltage capability and low thermal resistance between the tab and the external heat-sink.

### Features

- $V_{DS} = 650V$ ,  $I_D = 10A$ ,  $R_{DS(ON)}=0.75\Omega$

### Absolute Maximum Ratings @ $T_j=25^\circ C$ (unless otherwise specified)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	650	V
Gate-Source Voltage	$V_{GS}$	$\pm 30$	V
Drain Current, $V_{GS} @ 10V^2$	$I_D @ T_C=25^\circ C$	10	A
Pulsed Drain Current <sup>1</sup>	$I_{DM}$	40	A
Total Power Dissipation	$P_D @ TC=25^\circ C$	41.6	W
Total Power Dissipation	$P_D @ TA=25^\circ C$	1.92	W
Single Pulse Avalanche Energy <sup>3</sup>	EAS	32	mJ
Storage Temperature Range	$T_{STG}$	-55 to 150	$^\circ C$
Operating Junction Temperature Range	$T_J$	-55 to 150	$^\circ C$

Notes:

1. Pulse width limited by max. junction temperature.
2. Ensure that the junction temperature does not exceed  $T_{Jmax}$ .
3. Starting  $T_j=25^\circ C$ ,  $V_{DD}=90V$ ,  $L=1mH$ ,  $R_G=25\Omega$ ,  $V_{GS}=10V$

### Thermal Characteristic

Parameter	Symbol	Typical	Unit
Maximum Thermal Resistance, Junction-case	$R_{\theta JC}$	3	$^\circ C/W$
Maximum Thermal Resistance, Junction-ambient	$R_{\theta Ja}$	65	



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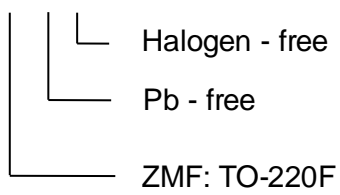
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### Pin Description

Pin	Symbol	Description
1	G	Gate
2	D	Drain
3	S	Source

### Ordering information

ACE165N750G XX + H





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### Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Technology Co., LTD. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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